

QUARTERLY STATUS REPORT
NAVAL RESERVE SCIENCE & TECHNOLOGY PROGRAM (PROGRAM 38)

From: Commanding Officer, NR NRL S&T Det 510 Houston, TX
To: Commanding Officer, Naval Research Laboratory, Washington, DC
Via: Director, Naval Reserve Science and Technology Program (Program 38)

Subj: PROJECT SUPPORT REPORT - SECOND QUARTER FY-02

Encl: (1) Project Summary Table
(2) Project Reports

1. This forwards the project activities of NR NRL S&T DET 510 Houston, TX during the period from 1 January 2002 to 31 March 2002. Enclosures (1) and (2) contain two project reports. Highlights for this quarter include:
 - a. Navy-NRL Liaison to the DoD Space Test Program Office at NASA Johnson Space Center : LCDR(sel) [...] conducted a comprehensive evaluation of STP Houston's computer based training course and provided constructive feedback to the application developers. He also began an investigation into the feasibility of flying an Interstellar Debris Sensor/Collector (NRL 7600-JPL-University of Florida) on the International Space Station. LCDR(sel) [...] regularly interacts with the USAF Staff of the STP Houston office in support of Navy and NRL interests. Total support this quarter was 36 man-hours.
 - b. UAV Video Systems: Processed several gigabytes of digital video imagery to track beach and shoreline morphology in support of littoral, amphibious, and special operations. Transformed the imagery into a rectified form that could be used to make quantitative measurements of beach morphology. Beta tested a software video routine for processing beach imagery. 40 man-hours of work this quarter.
 - c. Navy Research Psychologist Web Site: The Research Psychology Web site is the responsibility of CDR [...] from ONR. The site facilitates information exchange between Navy Research Psychologist including research topics that benefit the Navy. Modified and updated Research Psychology Web Site. Reviewed site, deleted outdated information, added new information as they occur.
 - d. Submariners Fatigue Study: The effect of sleep deprivation on sailor performance is becoming a big concern in the Navy. This ONR sponsored study is an extension of my FY2001 AT at the Brooks AFB Sleep lab in conjunction with several Navy Research Psychologists. Provided quantitative analysis of fatigue study data.
 - e. FNC Autonomous Operations (AO) Reserve Liaison Officer (RLO): Attended Intelligent Autonomy working group meeting at Eglin AFB. Conducted site visits and technical evaluations of Intelligent Autonomy programs at Florida Atlantic University (FAU) and the University of Miami. Data collected uploaded into the Intelligent Autonomy database. Wrote project support descriptions for further data contributions by other reservists. Attended South Florida Ocean Measurement Center (SFOMC), Dania Beach FL, organizational meetings involving principals from the Navy and participating civilian research institutions. SFOMC will be a major test & evaluation site for AUV operations as well as a Littoral ASW research site.
 - f. National Ocean Science Bowl (NOSB): Volunteered as Science Judge and Scorekeeper during ONR sponsored South Florida Regional NOSB competition at Harbor Branch Oceanographic Institution, Ft Pierce FL. Made positive impression of US Navy Reserve to several competing high school teams from around the state.
 - g. Program 20 Liaison, Meteorology and Oceanography (METOC) Reserves: Attended Program 20 technical symposium and briefed attendees on an alternative career path for 1805's in Program 38 (March 21-23). Networked amongst fellow 1805's and expressed interest in applying for the Executive Officer of METOC reserve unit, NMORA 1274.
2. If there are any questions or concerns I can be reached at [...].

[...]

Copy to:

Commanding Officer, N&MCRC Houston, TX
Commanding Officer, NR NRL S&T DET 206 Washington, DC

NR NRL S&T DET 510 FY-02 Quarterly Project Summary

Proj #	Project Name	Member(s) Responsible	Sponsor	Man Days	
				Quarter	YTD
1	ONR STAT	[...]	ONR Arlington, VA NFFTIO	0	81
2	FNC AO	[...]	ONR Arlington, VA FNC	3	18
3	NASA Liaison	[...]	NRL Code 7600	4.5	4.5
4	UAV Video Systems	[...]	NRL Code 7440	8	8
5	Naval Research Psychology Web Site	[...]	ONR Code 341	2.5	2.5
6	Submariners Fatigue Study	[...]	ONR Code 341	6	6
7	NOSB	[...]	ONR Code 00PA	1	1
8	Program 20 Liaison	[...]	Code N434	3	3
Total Man Days FY02				30	124

NR NRL S&T DET 510 FY-02 Projects

This report has been modified as follows:

Member names, phone numbers, email addresses have been removed for security reasons.

Please contact the Commanding Officer, NRL 510 for additional information.

Project Title: Science and Technology Action Team

Focus Area: ONR Naval Fleet/Force Technology Innovation Office (NFFTIO)

Project Summary: Members support the new requirement to stand up and man the STAT watch center at ONR. STAT objective was established after 9-11 to provide a robust connection between the Naval Research Science Advisors (NRSAs) and the broader Navy Research Enterprise. Goal is to get the right S&T subject matter expert(s) in contact with the NRSAs within 24 hours of initial request.

Accomplishments:

1st QTR: CAPT [...] (17 days) screened, helped interview and wrote the mobilization message for the 12 Program 38 members initially recalled to ONR/NRL. He also initiated the work to finalize specifications for the permanent STAT, including requirements for IT, Physical Security, COMSEC, furniture and display equipment. CDR [...] (15 days) programmed the improvements to the STAT collaboration software. CAPT [...] (17 days), CAPT [...] (15 days) and CAPT [...] (15 days) were STAT watch standers.

Customer: CAPT [...], USN, Asst Chief of Naval Research, ONR Arlington, VA, [...].

Reserve Project Team: CAPT [...], USNR, STAT Watch Captain, [...].

Plans for Future Support: Additional watchstanders may be requested on an as-needed basis.

Project Title: Future Naval Capabilities –Autonomous Operations

Focus Area: ONR Future Naval Capabilities (FNC)

Project Summary: Reserve Liaison Officer (RLO) coordinates with ONR FNC AO program managers (UAV, UUV, UGV, Intelligent Autonomy) and identifies project support opportunities. Opportunities suitable for Program 38 support include (but are not limited too) reviewing proposals, conference attendance, observing technology demonstrations, participating in war games, and updating program databases.

Accomplishments:

1st QTR: LCDR [...] re-established contact with ONR FNC program managers after completing a 57 ADT with Commander, US Naval Forces Southern Command in Puerto Rico in September. An immediate project in need of support was identified involving proposal reviews for the UAV Program Manager, Ms. [...]. As RLO for FNC AO, LCDR [...] found volunteers for this project in fellow unit members LCDRs(sel) [...] and [...]. LCDR [...] also delegated to CDR [...] (ONR HQ 106 unit) liaison and support activities for the AUV/UUV Program manager Dr. [...]. LCDR [...] attended the FNC RLO Conference held at ONR on Nov 26/27. He started incremental drill work for the Intelligent Autonomy working group. He began updating their database with meetings with Florida Atlantic University principal investigators. Total time spent so far this quarter is 5 man-days.

LCDR(sel) [...] reviewed 8 proposals in the Sensor Data Interpretation area and 6 proposals in the Adaptive Navigation Technologies area. He provided ratings and comments for them to the technical evaluation panel chair. He supported the teleconferences as necessary. Total time spent so far is 40 man-hours or 5 man-days.

LCDR(sel) [...] was tasked by ONR 353 ExLog, to provide "tactical & logistic" observations on a leased ARMY and NAVY vessel called the JOINT VENTURE. This all-aluminum catamaran Australian vessel named JOINT VENTURE is a high-speed vessel encompassing future logistic "streetfighter" vision. His five day underway included open ocean transit, range operations for sound cuts, a race between JOINT VENTURE and the Scandinavian SKOGE composite vessel, man overboard drills, general observations on how to onload and drop a Unmanned Underwater Vehicle9 (UUV) at high speed.

Customer: FNC Process Coordinator ONR 00ST; FNC AO, ONR Code 351; AUVs ONR Code 322; UAVs; UGVs; Intelligent Autonomy, NRL DC

Reserve Project Team: LCDR [...] USNR, FNC AO RLO

CDR [...], USNR, FNC AO Asst. RLO

CDR [...], FNC FAC

Plans for Future Support: Continue to identify opportunities for Program 38 support. Mine Symposium at the Naval Postgraduate School (April 2002), Intelligent Autonomy working group meeting at UAV Battle Lab, Eglin AFB (Jan 23/24), Second RLO conference, Proposal reviews, FBE-J participation, War game scenario development.

Enclosure (2)

Project Title: Navy-NRL Liaison to the DoD Space Test Program Office at NASA Johnson Space Center

Focus Area:

Project Summary: LCDR(sel) [...] serves as the Navy-NRL Liaison to the DoD Space Test Program (STP) Office at NASA Johnson Space Center, Houston, TX.

Accomplishments:

2nd QTR: LCDR(sel) [...] conducted a comprehensive evaluation of STP Houston's computer based training course and provided constructive feedback to the application developers. He also began an investigation into the feasibility of flying an Interstellar Debris Sensor/Collector (NRL 7600-JPL-University of Florida) on the International Space Station. LCDR(sel) [...] regularly interacts with the USAF Staff of the STP Houston office in support of Navy and NRL interests. Total support this quarter was 36 man-hours.

Customer: NRL Code 7600

Reserve Project Team: LCDR(sel) [...], USNR

Plans for Future Support: Continue to represent Navy-NRL interests to DoD Space Test Program, Houston.

Integrate into the active USAF STP staff on a part-time basis to work NRL payload issues at NASA Johnson Space Center.

Project Title: UAV video systems for tracking beach and shoreline morphology in support of littoral, amphibious, and special operations.

Focus Area: NRL Mapping, Charting, and Geodesy Branch c/7440

Project Summary: The goal of this project is to develop a system for the collection and analysis of shoreline and beach imagery that can be used to evaluate and predict beach characteristics relevant for littoral and amphibious warfare. The system is would ultimately be deployable on a UAV.

Accomplishments:

1st QTR:

Nothing to report.

2nd QTR:

Processed several gigabytes of digital video imagery transforming the imagery into a rectified form that could be used to make quantitative measurements of beach morphology. Beta tested a software video routine for processing beach imagery. 40 man-hours of work this quarter.

Customer: NRL Stennis Space Center c/7440.3

Reserve Project Team: LT [...], USNR

Plans for Future Support: Project will continue with additional image processing.

Project Title: Navy Research Psychologist Web Site

Project Summary: The Research Psychology Web site is the responsibility of CDR [...] from ONR. The site facilitates information exchange between navy research psychologist including research topics that benefit the Navy.

Accomplishments:

2nd QTR: Modified and updated Research Psychology Web Site. Reviewed site, deleted outdated information, added new information as they occur. "Man" Days: 2.5

Project Customer: ONR Code 341

Reserve Project Team: LCDR [...], NRL S&T 510

Plans for Future Support: Continue to support the modifications and updates of the Navy Research Psychology Web Site

Project Title: Submariners Fatigue Study

Project Summary: The effect of sleep deprivation on sailor performance is becoming a big concern in the Navy. This ONR sponsored study is an extension of my FY2001 AT at the Brooks AFB Sleep lab in conjunction with several Navy Research Psychologists.

Accomplishments:

2nd QTR: Quantitative analysis of fatigue study data. "Man" Days: 6

Project Customer: ONR Code 341

Reserve Project Team: LCDR [...], NRL S&T 510

Plans for Future Support: Continued quantitative analyses of fatigue study data.

Project Title: FNC Autonomous Operations (AO) Reserve Liaison Officer (RLO)

Accomplishments/Impact:

2nd QTR: Attended Intelligent Autonomy working group meeting at Eglin AFB. Conducted site visits and technical evaluations of Intelligent Autonomy programs at Florida Atlantic University (FAU) and the University of Miami. Data collected uploaded into the Intelligent Autonomy database. Wrote project support descriptions for further data contributions by other reservists. Attended South Florida Ocean Measurement Center (SFOMC), Dania Beach FL, organizational meetings involving principals from the Navy and participating civilian research institutions. SFOMC will be a major test & evaluation site for AUV operations as well as a Littoral ASW research site.

Method: Incremental drilling for database work and SFOMC liaison. IDTT for Intelligent Autonomy Working Group conference. Used email, phone, and fax.

Customers: FNC Process Coordinator ONR 00ST; FNC AO; AUVs ONR Code 322; UAVs

Reserve Project Team: LCDR [...], NRL S&T 510 (FNC AO RLO), and CDR [...], ONR S&T HQ 106 (FNC Focus Area Coordinator)

Plans for Future Support: Annual training at the National Defense University Wargaming and Simulation Center 29 April – 10 May. Goal is to incorporate FNC concepts into wargame scenarios. Draft project support descriptions for reservists to attend the 10th International Ground Vehicle student competition (06 July-08 July) and the AUVSI Unmanned Systems Symposium in Orlando, FL (09 July - 11 July). Participate in FBE-J as an observer/analyst (July-August).

Project Title: National Ocean Science Bowl (NOSB)

Accomplishments/Impact:

2nd QTR: Volunteered as Science Judge and Scorekeeper during ONR sponsored South Florida Regional NOSB competition at Harbor Branch Oceanographic Institution, Ft Pierce FL. Made positive impression of US Navy Reserve to several competing high school teams from around the state.

Method: Drilled for points only.

Customer: Public Affairs Office, ONR 00PA

Reserve Project Team: LCDR [...], NRL S&T 510

Plans for Future Support: LCDR [...] will volunteer time or use incremental/flexible drill for next year's (2003) South Florida Regional National Ocean Science Bowl competition.

Project Title: Program 20 Liaison, Meteorology and Oceanography (METOC) Reserves

Accomplishments/Impact:

2nd QTR: Attended Program 20 technical symposium and briefed attendees on an alternative career path for 1805's in Program 38 (March 21-23). Networked amongst fellow 1805's and expressed interest in applying for the Executive Officer of METOC reserve unit, NMORA 1274.

Method: IDTT orders to NAR Center Brunswick, ME.

Customer: Reserve Program manager, Code N434, Naval Meteorology and Oceanography Command

Reserve Project Team: LCDR [...], NRL S&T 510

Plans for Future Support: Transfer to Program 20 in FY-03 for duty as Executive Officer of NMORA 1274.
